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EXAMINER	
PADGETT, MARIANNE L	
ART UNIT	**PAPER NUMBER**
1762	

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/753,947	SIEGEL, STEPHEN B.	
	Examiner	Art Unit	
	Marianne L. Padgett	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7,13,16,18-20,22,27,28,31-33 and 37-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7,13,16,18-20,22,27,28,31-33 and 37-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/23/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/23/2006 has been entered.

2. The IDS of 2/23/2006 is made of record, and it is noted that none of the listed Japanese patent publications were actually supplied to the PTO, instead only English abstracts of these patents were supplied. Also the abstract to JP 2005-12,966 to be, which is to a plasma etching method is completely irrelevant to the claimed process.

3. The disclosure is objected to because of the following informalities: it is noted that discussion of figure 4 on pages 7-8 refers to "eccentric cams 50 and 52", etc., however review of the actual fig. 4 shows no reference numeral "52", but reference numerals 50 & 53. The specification is therefore objected to for failing to describe reference 53, but describing reference 52, which does not exist in the figure.

On page 8, 3rd full paragraph note the contradictory teaching of "non-oxygen-containing gas, e.g., carbon dioxide", which is confusing and scientifically incorrect, because CO_2 clearly contains oxygen.

Appropriate correction is required.

4. For the claim 1 as amended, it is noted that what is now required to be treated is the surface of the substrate (products, articles or other solid objects) on which there is a UV curable material (inks, coatings or adhesives), which is facing the LEDs (visible set + first UV array + second UV array, first UV wavelength $\neq$ second UV wavelength) on a panel. The LED array panel, which is facing the surface with the UV curable material is required to be moved in some fashion while light is emitted from all these LEDs, the light is required to be distributed on to the UV curable material on the surfaces, with

uniform curing to "an identical degree of polymerization" required to occur during the light emission/distribution. It is noted that the phrase added on lines 23-24 of claim 1, "the surfaces of... on the panel", does not appear to add any meaning to the claim that was not already required in the three emitting steps preceding it. In the distributing step (lines 25-30), while the first and second UV wavelengths are required to be distributed "on the surfaces..." and "the visible light over all the surfaces...", there is no apparent difference between the requirement of "on the surfaces" and that of "over all the surfaces", hence these will be taken to be equivalent requirements, simply for different wavelengths. However, it is noted further that a set of visible LEDs does not require any particular positioning on the panel with respect to each other or the claimed first and second arrays. Also while the first array must contain LEDs that even it the first wavelength and the second array must contain LEDs emit a different wavelength called the second wavelength, "the UV light" emitted from each array has been amended so that it is now only "comprising...", thus not limited to the first wavelength in the first array in the second wavelength in the second for a such that both raise can even it the same sets of wavelengths, as long as both are emitted, or they could emit totally different sets, except that since "the UV light" (emphasis added) is employed in both UV emitting steps this implies the same UV light overall is emitted from both raise due to antecedents and a lack of differentiation. Note that the lines 16-17 requirement that "said second array of UV LED assemblies being different than said first array of UV LED assemblies" only necessarily requires that they be 2 physically different sets of objects, not that the arrays be made up of different wavelength emitting LEDs.

Apparatus claim 16 has analogous language, which thus provide analogous interpretation for what its structure is required to be capable of.

With respect to claims 31-33 & 37-39, which have requirements concerning light sensors/sensing in order to control/maintain the light intensity, it is noted that there is support for maintaining constant intensity, such as by maintaining constant temperature as temperature increase can attenuate intensity

output in LEDs, found in original claims 31 & 32, plus on pages 2, 5, 9, 12, 13, 14, with figures 20-21 said to illustrate systems therefore, especially noting p.14, 3rd full paragraph & 4th paragraph bridging to p.15, however no discussion on "an identical degree of polymerization..." was found anywhere in the original specification.

It is noted that teachings concerning 'uniformity' of light sweet, distribution or application are found on pages 7, 8, 9 & 11, with reference to figure 4 where motion is used to minimize hotspots and spread the light emissions and figures two & 7 or configurations of the LEDs are employed for affecting the uniformity of the light distribution, however while the emitted light is used for curing, there is no discussion of uniformity of cure or identical degrees of polymerization found in the uniformity teachings.

5. Claims 1, 16 & 31-32 are objected to because of the following informalities:
In claim 1, lines 23-24, plus in the analogous phrase in claim 16, besides being redundant, this phrase appears to be lacking a correct verb tense, such as --the surfaces...are facing...-- which is a positive statement of something occurring, instead of "the surfaces...facing..." which is using "facing" to create a prepositional description of the surfaces, thus creating a sentence fragment (which fails to introduce any concept not already introduced before). Claims 31- 32, lines 19 & 8 are objected to for analogous reasons.

Appropriate correction is required.

6. Claims 1-4, 7, 13, 16, 18-20, 22, 27-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The intended scope of the types (wavelengths) of LEDs making up the first and second arrays is ambiguous, as on one hand it appears that the language is attempting to require them to be different, but on the other hand "comprising" phrasing is employed that can be inclusive of no actual differentiation,

with the antecedent basis for "UV light" being ambiguous, as both the second and third in knitting steps employ this phrase without clear differentiation. See above discussion in section 4.

Claim 20 as amended is now ambiguous, because as phrased it is unclear if the protective device (plastic or glass shooter plate) is positioned between the UV and the LED assemblies or if it is positioned between all the assemblies and the surfaces of the substrates with the UV curable material. Given the content of the claim before amending and what is supported in the specification (i.e. page 10, 1st paragraph), the examiner assumes the intent is the latter option, however the phrasing in the claims should be clear and unambiguous.

In claims 13 & 28, it is noted that the phrase "a current drain which only varies between 5% and 10%" is of an uncertain scope, because while percentages are a unitless quantity, in order to evaluate their meaning one must know the basis on which the percentage was calculated. While, the examiner assumes the basis is probably current, she does not know electronics well enough to know if that's necessarily the basis by which the percentage of current drain was measured, and if other quantities could have been employed, such as voltage, etc.

7. Claims 1-4, 7, 13, 16, 18-20, 22, 27-28, 31-33 & 37-39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The teachings of uniform distribution or application (e.g. equally) discussed above in section 4 are specifically related to use of motion, such as oscillation, or configuration of LEDs, as well as the control of the LEDs temperature in order to maintain the intensity, in order to affect the distribution of light, however none of these were found to actually be taught specifically to be related to producing "an identical degree of polymerization over [the/all] surfaces..." or "to uniformly cure", limitations that are

found in the independent claims. The examiner will agree, that if one keeps all photocuring conditions identical, which includes constant intensity with identical applied doses of radiation, one will inherently have identical degrees of polymerization, so if that was taught one could say that the limitation is inherently supported, but neither the claims nor the original specification actually necessitate that ALL conditions are maintained for every cured product, etc., so one really does need to have a teaching supporting these limitations, or a clear explanation on the record of why the original teachings in the specification support these amendments for the scope claimed. Note also that the UV curable inks, coatings or he says on the surfaces are not necessarily of uniform thickness is or the same materials, thus providing another reason why identical degrees of polymerization can neither be said to be inherent nor necessitated by claimed circumstances. The examiner does agree that it would be clear to one of ordinary skill that the more completely one can identically and constantly maintain one's curing conditions, inclusive of intensity from the LED arrays and even distribution of that constant intensity light onto the surface being cured, the more reproducibly one can identically cure to the same degree of polymerization the overall surface of each surface treated. This is a very old and well-known concept, but obviousness is not proper support for limitations that are not actually found discussed in the specification, so applicant should point out where the specification necessitates the claimed curing results, and how the claims contain all the critical components to produce the claimed results (or point out where the specification explicitly teaches these results, if the examiner has missed it), or limit the claims to what is actually taught in the specification.

For claims 1-4, 7, 13, 16, 18-20, 22, 27-28 there is a further problem of finding support for the particular LED arrays' configuration claimed, specifically while on p.10, the examiner found support for LED assemblies where arrays with different wavelengths can be constructed in random, mixed manner or in sequential rows, and found teachings associated with use of multiple arrays on a panel as discussed with respect to figures 3-4, 15, (maybe 17-19) & 20-21, there were no teachings of use of arrangements

where the first array could be one wavelength & the second array be a different wavelength, with visible light LEDs associated therewith in an unspecified manner, i.e. a set. It is noted that the abstract (&1st paragraph, p.2) of the disclosure teach is that "a row of UV-LED assemblies which emit light in the visible spectrum can be included so a user can visually see if the apparatus is working", as well as teaching use of UV LED assemblies that "emit light at a wavelength between 180 nm and 420 nm", where the examiner notes that 400 nm is the divide between UV and visible light. Use of specific wavelengths in the visible range are also found on pages 1, 10-11, with 10-11 in the arrays with UV LEDs, however none of these teachings are as broad as the configuration claimed with respect to the visible light LEDs. Note that the claims do not make any limit on what visible light may be employed, such as the maximum of 420 nm, as in original claim 1, or visible light LEDs in a row, that are employed for the specific purpose of checking that the apparatus is working, which were the only two types of visible light LED teachings found in the original specification. For these reasons, the amended claims encompass limitations that are broader than the scope of the enabling disclosure, hence include New Matter.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-4, 11, 13, 16, 18-2 & 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young (6,561,640 B1) or Biegelsen et al (6,536,889 B1), optionally in view of Dowling et al (2002/0074559 A1), as applied in sections 6 & 5 of the actions mailed 2/17/05 & 9/9/2005, or optionally further in view of Itou (5,986,682).

With respect to Young, note that both stages of curing may employ UV light emitting devices, i.e. LEDs, and that for each at least (i.e. 1, 2, 3, etc.) one array may be employed therefore, where the printed material being UV cured may include multiple substances each of which is cured using different wavelengths, with the wavelengths are all chosen dependent on the particular substances being cured and their curing characteristics. Young's teachings therefore encompass 2 arrays for each curing stage that contain the multiple wavelengths used to obtain the desired viscosity, i.e. equivalent to degree of polymerization, where it is noted that discussion on the paragraph bridging col.s 5-6 exemplified partial cure with four different substances all being cured to a first viscosity with appropriate amounts of their particular wavelength to provide that degree of cure. The figures all show movement of substrates past printing & curing stations, with figure 4 explicitly showing multiple deposits cured by one light emitting system, capable of providing the specific wavelengths required for curing each substance, thus while the configuration of the "at least on one array" that may be made of UV light emitting diodes are not disclosed, it is considered to remain obvious to one of ordinary skill in the art that Young's taught light emitting system may be constructed as multiple arrays on a panel/holder, where the multiple required wavelengths would have been distributed so as to enable the taught curing (either to a first viscosity/partial cure or completing the cure), where it would've been obvious to one of ordinary skill that such arrangements could have been inclusive of one array for each curing wavelength, or each array being composed of a mixture of all required wavelengths, either of which would read on applicants 2 UV LED arrays. Note on col. 9, line 12, that Young et al. teach the light emitting device can include a "polygon

raster output scanner", thus suggesting the use of oscillatory motion in application of the curing radiation, as well as the movement of the coated substrates pass the curing device.

Young does not discuss use of visible light LEDs for unclaimed purposes, along with the UV ones, nor is there any discussion of "uniformly curing", "distributing... wavelengths... equally", or "identical degree of polymerization", however even distribution resulting in uniform curing of articles being treated would remain an expectation of the competent engineer, for reasons as previously discussed. Anyone who is teaching curing or printed object would expect one of ordinary and competent skill to be curing the entire surface where that printing has been deposited. Furthermore, teachings of curing multiple substances in a first stage all to a first viscosity and then completing the cure in a second curing stage, would have been found suggestive to one of ordinary skill and competence, that one is affecting the same degree of cure throughout the printing being cured, thus suggestive of substantially uniform application both spatially & quantity wise in order to effect such teachings.

As Young does discuss choice of wavelength according to a particular substance curing characteristics, employing visible light LEDs would've been obvious to one of ordinary skill in the art for use for any substances that are optimally cured using visible light, thus would have been expected to be included in the at least one array and arrangements as discussed above. Dowling et al. continues to provide cumulative evidence for these points of obviousness particularly noting that their teachings while primarily directed to purification, inspection, are also said to be applicable to many other uses, such as curing systems for inks, epoxies, etc. ([0036]; [0064]; [0082]), and that while primarily directed to UV LEDs also discuss use of LEDs including blue and violet light comment i.e. wavelengths between 395-420 nm ([0039]; [0045]; [0054]; [0084]), such that teachings of use of these visible light wavelengths of 400-420 nm could be considered to suggest their application in curing processes with appropriate materials, but also as [0045] suggests that "visible LEDs could be activated to produce visual effects to provide an indication that the device's operating mode "would have been relevant to any LED device

regardless of the end used to which the light irradiated was put, it would've been further obvious to one of ordinary skill in the art to include visible light LEDs for this purpose on any of the suggested and uses of Dowling et al., which includes curing operation hence this teaching would've been obvious to employ with the LED array light sources of Young.

Alternately, with respect Itou (abstract; figures 6-9, 15, 36; col. 12, especially lines 3-10 & 29-64, particularly discussion of fig. 8; embodiment 2 on col. 16), who teaches LED devices for use as light sources used for "fixing light" on recording paper, which is considered substantially equivalent to a curing process for printing, it is taught for light emitting devices to be placed in a staggered arrangement on an emitting board, such that the quantity of light is uniform in the direction of the width of the recording paper due to the staggering of the rows of LEDs. Itou further notes that current used to energize the LEDs is limited to 20,000,000 amps or so, such that the quantity of heat emitted is small, but furthermore the LED support is made so as to dissipate heat, and that one would add a sufficient number of rows of staggered LEDs in order to be able to have sufficient quantity of radiation for fixing on recording media. Itou further teaches the use of a cam to cause reciprocating motion for the emitting board, i.e. LED array panel, and thereby eliminate variation in quantity of light due to clearance between admitting devices. It would have been obvious to one of ordinary skill in the art to use these teachings of Itou when choosing or designing the suggested LED arrays for use in Young, because they are suggested for use in recording on paper, which is analogous that Young was use in printing processes and provide advantages for uniform application of radiation from LED arrays that would've been consistent with the teachings of the primary references and provide advantages of uniformity with means of ensuring such, as well as providing details not present in the generic teaching of use of at least one array in the primary reference.

Biegelsen et al as previously discussed has analogous teachings to those of Young, hence the above applied analysis for the claims as amended would be essentially equivalent for this alternate reference.

10. Claims 7, 22, 31-33 & 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young or Biegelsen et al, in view of Dowling et al (optional), and further optionally in view of Itou (5,986,682) as applied to claims 1-6, 11-21, 26-30 and 35-39 above, and further in view of Ostler et al (2001/0046652 A1) or Contois et al (4,980,701 A) or Kennedy et al (5,634,711 A), as discussed in sections 7 & 6 of the actions mailed 2/17/05& 9/9/2005, or alternately further in view of Malinen (6,075,595) or Owen et al (2005/0152146 A1, noting provisional parent 60/379,019 with filing date 5/8/2002).

The independent claims 31 & 32 have been amended to require identical degrees of cure and in claim 31 to modify the required "maintaining the light intensity of the UV light emitted" to further state "at a generally constant level", however it is noted that if one is already required to be maintaining the light intensity emitted that that light intensity is by definition at a generally constant level or it would not be been maintained, hence that particular amendment is not seen to create any definable further limitation to the claim. Arguments made above in section 9 concerning uniformity in degree of cure/polymerization are equally applicable in this rejection.

Malinen (6,075,595) or Owen et al (2005/0152146 A1) provide further teachings supportive of the previously asserted obviousness.

Malinen (abstract; figures 1 & 2a; col. 3, lines 3-22 & 61-67+; col. 4, lines 23-55, especially 46-49; col. 6, lines 22-51; col. 7, lines 50-67) provides teachings to the effect that LEDs increased temperature can cause decreased intensity and a change of the emitted wavelength, thus provides mechanisms by which the operational temperature of the LED may be maintained during its use, such as a cooling plate 20 illustrated as having fins, use of cooling and/ heating to compensate for warmup of the LEDs, use of a the temperature measuring element (7) and a measuring element (Peltier element) to enable temperature stabilization. Hence, it would've been obvious to one of ordinary skill in the art to control the operational temperature of the LEDs as taught by Malinen for the suggested LED arrays of

Young, in order to ensure that the optimum specified curing wavelength for the multistage curing processes are maintaining, and also as a means of controlling the intensity/amount of specific wavelength irradiation in Young to produce desired degrees of curing. Note as Young's process is dependent on use of specific wavelengths to cure depositions with specific photoinitiators, it would have been a matter of competent workmanship to ensure that the employed LEDs maintained their desired parameters (wavelength, intensity, etc.), thus motivating use of techniques of LED control/maintenance of this secondary reference, to enable the optimum performance of Young's teachings. On column 4, lines 51-55 Mallinen notes that while not needed with their technique, stabilization can be affected with recourse to measurement of the intensity and control based on that measurement of the current passing through the LED, which is suggestive of the no need to limit the variation in current which passes or is drawn through the LED in order to stabilize the intensity which further relates to the obviousness of claims 13 and 28, as well as the obviousness of measuring the light intensity, and not just the temperature.

Alternately, Owen et al. (abstract; figures 2-6; [0029]; [0032-40]; [0042]; [0044]; [0052]; claim 13; or in the provisional see pages 4-7 & 10; figure 1) teach high-efficiency solid-state lighting sources, and that may employed LEDs and may be used for photo polymerization, with discussions of light intensity and spatial uniformity, etc., as required for specific applications. Owen et al. note that the power density output (i.e. intensity) is affected by chip array spacing and density, and teach thermal control of the substrate on which the LED chips are mounted, such as via the use of heatsink with fins and fans, with the use of input from temperature sensors (37, 70, 76, etc.) that may provide real-time in-situ temperature control to affect the taught thermal stability and heat dissipation, and choice of specific wavelength depending on the specific material transformation desired, which will affect the required power density output. Owen et al. may employ multiple arrays in a module or light bar, where it is taught to move this light source relative to the target or work, such that light uniformity is improved by moving the source, because movement spreads the light output evenly across the work, where various configurations and any

motive means necessary to achieve objectives of process are taught to be used. In [0052] Owen et al. discuss methods of balancing in controlling light intensity variations across the LED array noting use of current flow control to effect LED light output intensity (also relates to claims 13 & 28). It would have been obvious to one of ordinary skill in the art to apply these concepts to the photo polymerization process of the primary reference for the advantages taught, and because the generically disclosed LED arrays of Young do not provide such details, such that one of ordinary skill would look to known teachings in the art to supply specific details, which Owen et al. provides for analogous uses.

It is further noted with respect to either Owen et al. or Mallinen, that since they are specifically interested in controlling intensity, it would've been obvious to one of ordinary skill in the art to provide sensors for measuring that intensity in order to at least confirm that the intensity has been in court controlled as desired. Again, the above arguments apply equivalently to the alternate primary reference of Biegelsen et al.

11. The reference to Speakman (GB 2,350,321A) cited in a previous IDS remains of interest as cumulative to the primary references, and optional secondary reference for a mechanism for moving rotating the LED arrays in analogous uses as discussed in section 7 of the action mailed 9/9/2005.

Other art of interest include two patent application publications to applicant (2005/0104946 A1 & 2005/0222295 A1); Ignatius et al. (5,278,432) or Vackier et al. (6,525,752 B2), who teach the arrays may be made up of individually staggered LEDs; Kovac et al (6200134 B1, especially abstract figures 3-4 col. 7, lines 39-, line 11+) who illustrates staggered LED arrays and discusses temperature control; Powell et al. (2004/0156130 A1) who uses an array of microlenses to homogenized or affect a substantial uniform intensity from light sources that may be inclusive of LED arrays; and Brukilacchio (2003/0218880 A1) who teach high intensity in spatial human uniformity for a white light LED optical system.

12. Applicant's arguments filed 2/23/2006 & discussed above have been fully considered but they are not persuasive.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on M-F from about 8:30 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks, can be reached at (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MLP/dictation software

3/8-9 & a 15/2006

MARIANNE PADGETT
PRIMARY EXAMINER